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CENTRAL INSTITUTE OF AVIATION ENGINE-BUILDING (TsIAM) MOSKVA, USSR

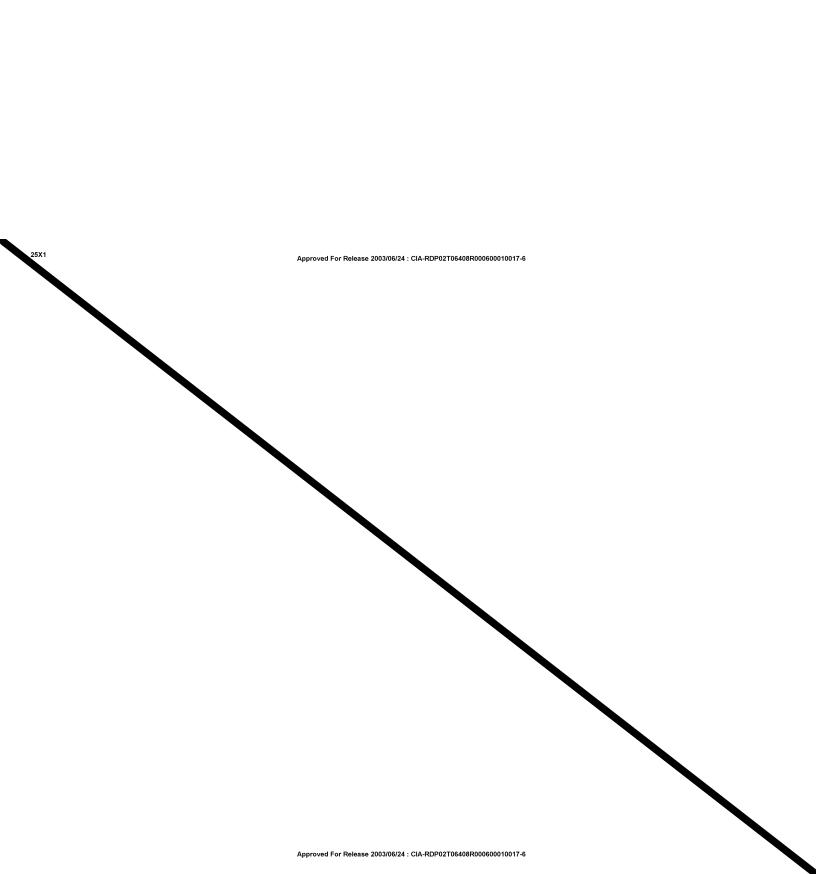
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PHOTOGRAPHIC INTERPRETATION REPORT

CENTRAL INSTITUTE OF AVIATION ENGINE-BUILDING (TsIAM) MOSKVA, USSR

APRIL 1967

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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INTRODUCTION

This report is a study of the chronological development of the Central Institute of Aviation Engine-Building imeni P. I. Baranov (hereafter referred to by the Russian acronym TsIAM). TsIAM (55-34N 037-56E; located approximately 15.5 nautical miles (nm) southeast from the center of Moskva, USSR, and approximately 6 nautical miles west of the Central Aerohydrodynamic Institute (TsAGI) and the Flight Test Institute, both of which are near Ramenskoye. TsIAM is also situated near the Moscow/Myachkovo Airfield on the north bank of the Moskva River. Other transportation services include both major roads and rail lines (Figure 1).

The fenced area of TsIAM covers approximately 350 acres. The large housing and support area located along the northern perimeter fence has not been included in this report. A building-by-building construction history of TsIAM is presented graphically in Figure 2 and in tabular form in Table 1, which also contains chronological details and interpretations of the basic functions of all the structures: all item numbers refer to Figure 2 and Table 1. The information contained in this report has been compiled from all available photography up to and including photography, the most recent photography of good interpretability (Figure 3).

TsIAM is the major air-breathing engine research, development, and test center of the Soviet aerospace industry. TsIAM has been operational for approximately 10 years. The initial emphasis was on the construction of the very large engine test building (item 90). Later construction has included the 2 very large aircraft engine test buildings (items 11 and 21).

HIGHLIGHTS OF THE CHRONOLOGICAL DEVELOPMENT OF TsIAM

1942

When observed on photography of the area now occupied by TsIAM consisted of a Approved For Release 2003/06/24 : TOP SECRET

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large open field. There were no buildings, structures, or construction activity evident.

1956

This area was not photographed again until and by this time TsIAM was in an advanced stage of construction. Many of the facilities were probably already in partial operation. Major facilities included a very large engine test building (item 90), 2 large assembly/shop buildings (items 103 and 104), a steamplant (item 101), cooling towers (item 87), a large transformer yard (item 93), and most of the housing and support area. The interpretability of this photography precluded the identification of any structures which might have been in an early stage of construction.

TsIAM was not photographed during the period from

The first

1962

in) was of very poor into	erpretability
and could not be used.	The first usable	photo-
graphy, obtained in	was also of poor	interpreta-
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FIGURE	E 1. LOCATION MAP.	┺

bility; however, several of the larger structures were observed to be under construction. These included 2 large aircraft engine test buildings (items 11 and 21), 2 large assembly/shop buildings (items 14 and 15), and a shop building (item 27). Photography of revealed at least 45 structures which were not visible on photography; however, many of these structures could have been present or under construction in _____ The most significant of these new structures were a compressor building (item 33), a laboratory building (item 43), a test structure (item 58), and 2 engine test buildings (items 63 and 66).

The large bank of pressure bottles (item 52) and several small buildings were under construction when seen on photography of Construction also had commenced on a large building (item 40); after reaching approximately a midstage of construction by construction ceased and little or no progress has since been observed.

1964

photography

The most significant construction activity observed during 1964 included the completion of the large bank of pressure bottles (item 52) and continued progress on those structures previously reported as being under construction. An area of new construction activity in the southwest corner was observed on photography of

1965

Construction during 1965 consisted of the completion of the 2 large assembly/shop buildings (items 14 and 15), the 2 large aircraft engine test buildings (items 11 and 21), and a shop building. By construction was initiated on a new shop building (item 8) and on a new laboratory/ engineering building (item 53).

1966

The only construction activity observed by was additional ground scarring in the southeast corner and continued progress on the shop building (item 8) and on the laboratory/engineering building (item 53).

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Table 1. Functions, Dimensions, Roof Cover, and Chronology of Structures at TsIAM, Moskva, USSR.
(Hem numbers are keyed to Figure 2)

Item No	Probable Function		nsions t) Width	Roof Cover (sq ft)	Date First Observed	Comments	Item No	Probable Function	Dimensions (ft) Length Width	Roof Cover (sq ft)	Date First Observed	Comments
1 2 3	Utility bldg Utility bldg Utility bldg	50 20 65 50	40 20 25 45	2,000 400 1,625 2,250		Items 1-6 located in area of most recent construction activity See note 1 See note 1	51 52	Utility bldg Pressure bottles	100 20	2,000		A total of 49 bottles (each 65 ft long & 8 ft in diam), aligned in a horizontal position in 2 rows of 2 tiers each, 12 bottles in a tier; 1 bottle positioned at end of the 2 rows
5 6 7 8 9	Utility bldg Utility bldg Utility bldg Utility bldg Shop bldg, u/c Utility bldg	80 60 40 295 75	40 25 20 120 25	3,200 1,500 800 35,400 1,875		See note 1 See note 1 Approx 70% complete	53 54 55 56 57	Laboratory/admin bldg Utility bldg Utility bldg Laboratory bldg Utility bldg	100 60 140 40 Irregular 130 105 80 55	6,000 5,600 6,200 13,630 4,400		In a late stage of construction
10 11	Utility bldg Aircraft engine test bldg	•		3,600 96,775		Contains 4 large (180 x 45 ft each) L-type test cells; 2 equipped with noise suppressors	58 59	Test Structure Utility bldg	Irregular	4,850 1,050		A large L-shaped excavation adjacent to item 58 contains a large open aircraft engine test stand
12 13 14 15	Utility bldg Security bldg Assembly/shop bldg Assembly/shop bldg	125 100 375 520	20 40 350 380	2,500 4,000 131,250 197,600		approx 75 ft high & 45 ft in diam; sup- pressors for other 2 cells u/c Construction bldg, prob temporary Control point for southern entrance	60 61 62 63 64 65	Utility bldg Utility bldg Utility bldg Utility bldg Engine test bldg Utility bldg	55 20 80 25 60 25 95 35 80 20	1,100 2,000 1,500 3,325 1,600		
16 17 18 19 20	Utility bldg Utility bldg Utility bldg Utility bldg Utility bldg Utility bldg	65 90 95 95 95	15 20 45 30 45	975 1,800 4,275 2,850 4,275		Construction bldg, prob temporary Construction bldg, prob temporary	66 67 68 69 70	Laboratory bldg Engine test bldg Utility bldg Utility bldg Utility bldg Utility bldg Utility bldg	Irregular 70 40 Irregular Irregular 100 35 130 70	8,400 2,800 775 6,200 3,500 9,100		
21	Aircraft engine test bldg	Irreg		90,425		Contains 4 large (160 x 45 ft each) L-type test cells; 2 equipped with noise suppressors approx 70 ft high & 20 ft in diam; sup- pressors for other 2 cells u/c	71 72 73 74 75	Utility bldg Utility bldg Utility bldg Utility bldg Utility bldg Utility bldg	Irregular 130 35 130 35 140 30 Irregular	6,200 4,550 4,550 4,200 4,500		
22 23 24 25 26 27 28	Utility bldg Utility bldg Utility bldg Utility bldg Utility bldg Shop bldg Shop bldg	115 75 40 35 85 310 115	30 40 30 25 40 155 70	3,450 3,000 1,200 875 3,400 48,050 8,050			76 77 78 79 80 81 82	Shop bldg Utility bldg Utility bldg Utility bldg Utility bldg Admin bldg Utility bldg Utility bldg	Irregular 145 40 130 45 Irregular 110 55 Irregular 110 25	20,275 5,800 5,850 4,725 6,050 4,675 2,750		Prob motor pool dispatch office
29 30 31 32 33	Utility bldg Utility bldg Utility bldg Security bldg Compressor bldg	60 125 75 40 335	50 25 25 40 70	3,000 3,125 1,875 1,600 23,450		Control point for SW entrance Bldg served by very large transformer yard; 3 bus bars enter west side of bldg	83 84 85 86	Maintenance bldg Admin bldg Security bldg Pumphouse Cooling towers	170 35 145 45 60 35 80 35	5,950 6,525 2,100 2,800		Motor vehicle maintenance Control point for NW entrance (main entrance) Two semiburied water tanks are adjacent to item 86
34 35	Shop bldg Poss cooling towers, u/c	Irreg	ular 30	7,425 4,050		Early stage of construction	88	Shop bldg	205 65	13,325		Thirty-three cooling towers, aligned in 3 rows of 11 each
36	Admin/engineering bldg	120	45	5,400		Small multistory bldg	89 90	Utility bldg Engine test bldg	45 45 Irregular	$2,025 \\ 338,025$		Contains test cells for atmospheric & environ-
37 38 39 40	Utility bldg Utility bldg Utility bldg Bldg u/c	120 120 75	40 50 55 	4,800 6,000 4,125		Prob associated with tall stack nearby Early stage of construction precludes identi- fication; does not appear to be a steamplant	91 92 93 94	Admin bldg Warehouse Transformer yard Transformer mainte- nance bldg	125 35 390 35 100 55	4,375 13,650 5,500		mental testing of aviation engines
41 42 43 44 45 46	Utility bldg Utility bldg Laboratory bldg Utility bldg Utility bldg Semiburied water tanks	40 40 Irre 50 175	20 15 egular 15 45	800 600 28,025 750 7,875		as previously identified At least 3 semiburied water tanks & a pump-	95 96 97 98 99 100 101 102	Utility bldg Utility bldg Shop bldg Shop bldg Utility bldg Utility bldg Steamplant	75 25 50 20 Irregular 120 70 65 30 80 35 Irregular	1,875 1,000 15,950 8,400 1,950 2,800 19,050		The Poly
47	Fuel storage area					house, separately fenced Four POL tanks, each approx 35 ft in diam &	103	Fuel storage Assembly/shop bldg	505 160	80,800		Three POL tanks, each approx 40 ft in diam, containing fuel for steamplant (item 101)
48 49 50	Shop bldg Utility bldg Warehouse	150 65 165	60 35 20	9,000 2,275 3,300		a pumphouse, separately fenced	104 105 106 107	Assembly/shop bldg Main admin bldg Admin bldg Fuel storage	Irregular Irregular Irregular	47,250 17,700 9,225		

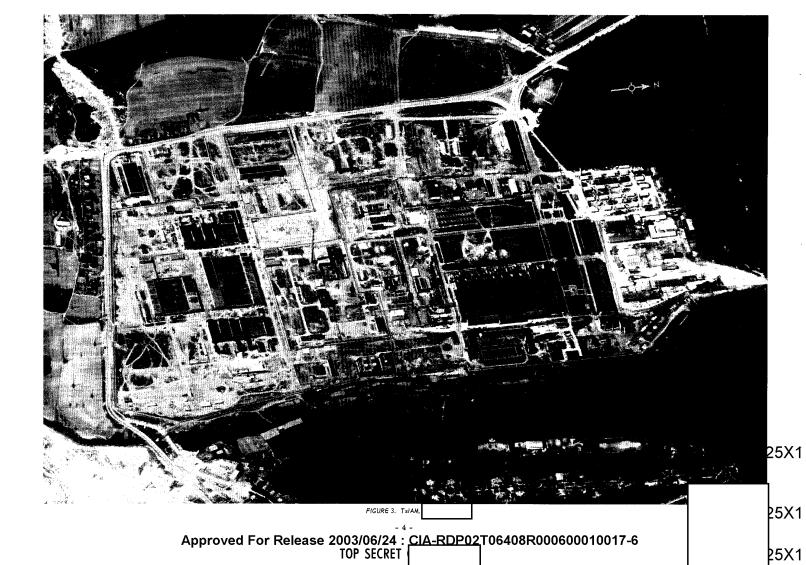
^{*}Completion dates are not stated because of gaps in coverage; most of the small structures were apparently complete when first observed. When determinable, completion dates of major structures are presented in the text.

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